



US 70 CLAYTON BYPASS

DIVISION FOUR

Kevin Bowen – Bridge Construction Engineer
(Former Resident Engineer)

Corey McLamb - Resident Engineer





Project Facts

- 10.7 miles in length
- 4 lane divided, controlled access, high speed freeway
- 4 interchanges including I-40 and US 70
- 22 bridges, 11 box culverts
- Construction Cost: \$123 Million
- 4 year contract, began May 2005, completion date of June 2009





Project Facts

- 565 contract line items
- Waste – 1.68 million cubic meters
- Borrow – 1.2 million cubic meters
- Unclassified – 3.4 million cubic meters
- EC is 9% of the total contract





Schedule

Contractor's Plan

- Roadway divided into thirds. S.T. Wooten, PLT, and Thompson
- Structures were subcontracted individually
 - 6 Structure Contractors
- 5 Asphalt paving crews on project at single time.
- Project is currently scheduled to open more than a year ahead of schedule





Highlights

- Environmental Stewardship
- Traffic Control
- Concrete Paving
- Public Information
- ITS





Environmental Stewardship

Goal for the Clayton Bypass

- Preserve the integrity of every stream, wetland, or environmentally sensitive area including the tributaries into Swift Creek with specific emphasis on protecting an endangered “mussel.”





Environmental Stewardship

Dwarf Wedge mussel

- Measures the health of our eco system
- NC supports the greatest number of known sites in the Neuse River and Tar River Basins.





Environmental Stewardship

Erosion Control Devices

- Basin Size
- Coir Fiber Baffles
- Faircloth skimmers
- Turbidity Gauges
- Floc Logs
- Silt Savers (Domes and Sacks)
- Silt Bag on Slope Drain
- Ground cover alternatives





Environmental Stewardship

Permanent Features

- Culvert Designs
 - Wildlife culvert
 - Sills for meandering flow
 - Double barrel culverts – one barrel overflow
- Stream relocation
 - Cross vane
 - Boulder wall
- Level Spreaders
- Hazardous Spill Basins





Environmental Stewardship

Efforts

- 72 Permit Sites –Wetland and Neuse River Buffer Sites
- Site specific Preconstruction Meetings
- Monthly Environmental Agency
- Weekly Roadside Environmental reviews
- Daily EC reviews and weekly reports
- Post storm reviews of every permit site (team assignment)
- DOT furnished Training for Contractor personnel for EC





Environmental Stewardship

Results

- ICA's - 2
- NOV's - 0
- Developed an excellent relationship with the agencies.
- Sediment Commission Review
 - State Sediment Specialist, Mr. Gray Hauser's paraphrased quote during the review: "This project is a model for the way we expect things to be done."





Traffic Control

- Safety and Traffic Operations Meetings
- Johnston Co. Incident Management Meetings
- Minimized cattle chute
- High tension cable
- Moveable barrier
- Night work - Detoured I-40
- As many as 6 CMS's used in each direction on I-40
- Speed reduction through workzone
- Accident severity and number went down on I-40





Concrete Paving

- Widening of I-40
- Design
- Edge Slump
- Inexperience
- Workmanship
- Scan





Public Information

- Pre-Construction Flyers
- Pre-Construction Public Meeting
- E-mails to public on project updates
- Project Website
- Routine press releases for traffic shifts and lane closures
- Target local amphitheater for patrons during major traffic shift
- Major PI planned for opening including project tour for media





ITS

- Short Term solution to mitigate the impacts on the Clayton Bypass opening on I-40
- 4 DMS
- 11 Cameras
- Speed Sensors along US 70 business, US 70 and I-40





Questions?